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Attorney Docket No.: P-4659-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): HASSON, Jaime Examiner: Not yet known
Serial No.: 10/026,662 Group Art Unit: 2661
Filed: December 27, 2001
Title: TRANSMITTER HAVING A SIGMA-DELTA MODULATOR WITH A NON-
UNIFORM POLAR QUANTIZER AND METHODS THEREOF

Mail Stop Amendment
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 C.F.R. §§1.56, 1.97 and 1.98, this Information Disclosure Statement includes Form PTO-1449:

1. ☐ listing documents including patents, publications and other information for consideration by the Examiner, however, since the subject application was filed after June 30, 2003, copies of United States patents, and/or United States patent applications, and/or United States patent application publications are not included in this information disclosure statement; and/or
2. ☐ listing documents including patents, publications and other information that have been previously cited or submitted to the Patent Office in prior application U.S. Serial No. _____, filed _____ which is properly identified and relied on for an earlier effective filing date under 35 U.S.C. 120 for consideration by the Examiner; however, in accordance with 37 C.F.R. 1.98(d), copies of such documents are not included in this information disclosure statement; and/or
3. ☒ listing documents including patents, publications, and other information for consideration by the Examiner, copies of which are included with this information disclosure statement;
4. ☐ listing other information for the Examiner's consideration which was cited in a communication from a foreign patent office in a counterpart foreign application, a copy of which is included with this information disclosure statement.

APPLICANTS: HASSON, Jaime
SERIAL NO.: 10/026,662
FILED: December 27, 2001
Page 2

The information herein cited is only in fulfillment of Applicant(s) duty of candor in disclosing all information brought to Applicant(s) attention. This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art". If it should be determined that any of the listed documents do not constitute "prior art" under United States law, Applicant(s) reserve the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant(s) further reserve(s) the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

In accordance with MPEP Sections 609 and 707.05(b), it is requested that each and every document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO-1449) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing on Form PTO-1449. Such initialing is requested even if the Examiner does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application and is evidence that the Examiner has considered the document.

This Information Disclosure Statement is being filed:

I) ☒ Within three (3) months of filing the subject Application or entry of the subject Application into the national stage or before mailing of the first Office Action on the merits of the subject Application or a request for continued examination thereof, whichever event occurs last pursuant to of 37 C.F.R. §1.97 (b); or

II) ☐ After the period specified in (I) but before the mailing date of either a final Official Action under 37 C.F.R. §1.113 or a notice of allowance under 37 C.F.R. §1.311 whichever occurs first and;

1. ☐ the undersigned hereby states that each item of information listed on the Form PTO-1449 was either (i) cited in a communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this Information Disclosure Statement or (ii) not cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, not known to any individual designated in §1.56(c) more than three (3) months prior to the filing of this information disclosure statement; or

2. ☐ the undersigned hereby authorizes the Patent Office to charge the fee in the amount of \$180.00 under 37 C.F.R §1.17 (p) to Deposit Account 50-3355.

III) ☐ After the period in (I) and (II) but before the payment of the issue fee and,

1. The undersigned hereby states:

a) ☐ that each item of information cited on the form PTO-1449 was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three (3) months prior to the filing of this Information Disclosure Statement; or

b) ☐ that no items of information contained in Form PTO-1449 was cited in a communication from a foreign patent office in a counterpart foreign application, and to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement; and

2. ☐ The undersigned hereby authorizes the Patent Office to charge the Petition fee in the Amount of \$180.00 under 37 C.F.R §1.17 (p) to Deposit Account 50-3355.

Except for issue fees payable under 37 C.F.R. §1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-3355.

Respectfully submitted,


Naim Shichrur

Agent for Applicant(s)
Registration No. 56,248

Dated: March 17, 2005

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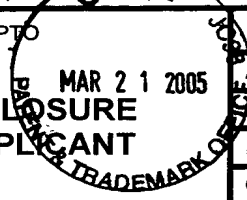
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Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/026,662
				Filing Date	December 27, 2001
				First Named Inventor	HASSON, Jaime
				Group Art Unit	2661
				Examiner Name	Not yet known
Sheet	1	of	4	Attorney Docket Number	P-4659-US

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	A	5,012,200		Melnzer	04-30-1991	
	B	5,862,460		Rich	01-19-1999	
	C	5,903,854		Abe et al.	05-11-1999	
	D	6,330,455		Ichihara	12-11-2001	
	E	5,302,914		Arntz et al.	04-12-1994	
	F	6,285,251		Dent et al.	09-04-2001	
	G	5,694,093		DaSilva et al.	12-02-1997	
	H	5,854,571		Pinckley et al.	12-29-1998	
	I	5,872,481		Sevic et al.	02-16-1999	
	J	6,133,788		Dent	10-17-2000	
	K	6,201,452		Dent et al.	03-13-2001	
	L	5,345,189		Hornak et al.	09-06-1994	
	M	5,264,807		Okubo et al.	11-23-1993	
	N	5,909,643		Alhara	06-01-1999	
	O	5,929,702		Myers et al.	09-27-1999	
	P	5,758,269		Wu	05-26-1998	
	Q	5,786,727		Sigmon	07-28-1998	
	R	5,886,575		Long	03-23-1999	
	S	5,880,633		Leizerovich et al.	03-09-1999	
	T	5,739,723		Sigmon et al.	04-14-1998	

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
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Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	10/026,662
				Filing Date	December 27, 2001
				First Named Inventor	HASSON, Jaime
				Group Art Unit	2661
				Examiner Name	Not yet known
Sheet	2	of	4	Attorney Docket Number	P-4659-US

U.S. PATENT DOCUMENTS

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	V	5,872,481		Sevic et al.	02-16-1999	
	W	5,661,434		Brozovich et al.	08-26-1997	
	X	5,420,541		Upton et al.	05-30-1995	
	Y	5,568,094		Bowen et al.	10-22-1996	
	Z	5,548,246		Tamamoto et al.	08-20-1996	
	AA	5,541,554		Stengel et al.	07-30-1996	
	AB	5,724,005		Chen et al.	03-03-1998	
	AC	4,439,744		Kumar et al.	03-27-1984	
	AD	5,621,351		Puri et al.	04-15-1997	
	AE	4,433,312		Kahn	02-21-1984	
	AF	5,974,041		Kornfeld et al.	10-26-1999	
	AG	3,777,275		Cox	12-04-1973	
	AH	6,587,511		Barak et al.	07-01-2003	
	AI	5,901,346		Stengel et al	05-04-1999	
	AJ	2003/0125065		Hasson et al.	07-03-2003	
	AK	6,825,719		Barak et al.	11-30-2004	
	AL	10/131,750		Barak et al.	04-24-2002 (filing date)	
	AM	5,786,728		Alinikula	07-28-1998	
	AN	6,633,199		Nielsen et al.	10-14-2003	
	AO	6,147,653		Wallace et al.	11-14-2000	
	AP	6,008,703		Perrott et al.	12-28-1999	
	AQ	2003/206056		Hietala	11-06-2003	

FOREIGN PATENT DOCUMENTS

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		Office ³	Number ⁴	Kind Code ⁵ (if known)				
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Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/026,662
				Filing Date	December 27, 2001
				First Named Inventor	HASSON, Jaime
				Group Art Unit	2661
(use as many sheets as necessary)				Examiner Name	Not yet known
Sheet	3	of	4	Attorney Docket Number	P-4659-US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	AR	FREDRICK H. RAAB, "Efficiency of Outphasing RF Power-Amplifier Systems", IEEE Transactions on Communications. Vol. Com-33, No. 10, Oct 1985, pp. 1094-1099	<input type="checkbox"/>
	AS	STEVE C. CRIPPS, "RF Power Amplifiers for Wireless Communications", 1999, USA, pp. 219-250	<input type="checkbox"/>
	AT	D.C. Cox, "Linear Amplification with Nonlinear Components", IEEE Transaction on Communications, December 1974, pp.1942-1945.	<input type="checkbox"/>
	AU	Bob Stengel and William R. Eisenstadt, "LINC Power Amplifier Combiner Method Efficiency Optimization", IEEE Transaction on Vehicular Technology. Vol.49, No. 1, January 2000, pp.229-234	<input type="checkbox"/>
	AV	Bob Stengel, "LINC Linear Transmitter Technology Review", Presented at International Microwave Symposium, Boston, MA, June 11, 2000, pp.1-32.	<input type="checkbox"/>
	AW	S.A. HETZEL et al., "A LINC Transmitter", University of Bristol, IEEE, 1999, pp. 133-137	<input type="checkbox"/>
	AX	S. O. Ampem-Darko, H.S. Al-Raweshidy, "A Novel Technique for Gain/Phase Error Cancellation in LINC Transmitters", 1999 IEEE , pp. 2034-2038	<input type="checkbox"/>
	AY	T. A. D. Riley and M. A. Copeland, "A simplified continuous phase modulator technique," IEEE Trans. on circuits and systems, VOL. 41, NO. 5, pp. 321-328, May 1994.	<input type="checkbox"/>

Examiner Signature		Date Considered	
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* **EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449B/PTO		MAR 21 2005		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number		10/026,662	
		Filing Date		December 27, 2001	
		First Named Inventor		HASSON, Jaime	
		Group Art Unit		2661	
(use as many sheets as necessary)		Examiner Name		Not yet known	
Sheet	4	of	4	Attorney Docket Number	P-4659-US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	AZ	N. M. Filiol, T. A. D. Riley, C. Plett and M. A. Copeland, "An agile ISM band frequency synthesizer with built-in GMSK data modulation," IEEE Journal of Solid-State Circuits, VOL. 33, NO. 7, pp.998-1008, July 1998.	<input type="checkbox"/>
	BA	M. H. Perrot, T. L. Tewksbury III, C. G. Sodini, "A 27-mW CMOS Fractional-N Synthesizer Using Digital Compensation for 2.5-Mb/s GFSK Modulation", IEEE Journal of Solid-State Circuits, VOL. 32, NO. 12, pp.2048-2060, Dec 1997.	<input type="checkbox"/>
	BB	T. Yamaji, A. Yasuda, H. Tanimoto, Y. Suzuki, "A Digital-to-RF Converter Architecture Suitable for a Digital-to-RF Direct-Conversion Software Defined Radio Transmitter", IEICE Trans. Commun., vol. E83-B, No. 6, pp. 1254-1260, June 2000.	<input type="checkbox"/>
	BC	MICHAEL H. PERROTT ET AL., "A Modeling Approach for Σ - Δ Fractional-N Frequency Synthesizers Allowing Straightforward Noise Analysis", IEEE Journal of Solid-State Circuits, Vol. 37, No. 8, August 2002, pp. 1028-1038	<input type="checkbox"/>
	BD	M.H. Perrott, "Techniques for High Data Rate modulation and Low Power Operation of Fractional-N Frequency Synthesizers", PH.D Dissertation, MIT, September 1997, Retrieved from the Internet, URL:http://www-mtl.mit.edu/{perrott/pages/thesis.pdf/, pp. 1-90	<input type="checkbox"/>
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